



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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DRAFT

STATEMENT OF LEGAL AND FACTUAL BASIS

East Tennessee Natural Gas, LLC
McClure, Dickenson County, Virginia
Permit No. SWRO11046

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9VAC5 Chapter 80, East Tennessee Natural Gas, LLC has applied for a Title V Operating Permit for its McClure facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

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FACILITY INFORMATION

Permittee

East Tennessee Natural Gas, LLC
P.O. Box 1642
Houston, Texas 77251-1642

Facility

Compressor Station 3401
2213 Smith Ridge Road
McClure, Virginia 24269

County-Plant Identification Number: 51-051-00034

FACILITY DESCRIPTION

NAICS Code: 486210 – Booster pumping station, natural gas transportation

Natural gas enters the facility from local production facilities to a set of scrubbers where impurities are separated from the natural gas. The natural gas then goes through the multi-stage gas compressors. From there, the natural gas goes through the dehydration unit and then into the transmission pipeline for distribution to customers along the pipeline system. Two natural gas-fired Cooper-Bessemer, model W-330, lean burn, 2-cycle, reciprocating engines (emission unit I.D. S001 and S002) rated at 4,650 hp (34.9 MMBtu/hr) each, are used for natural gas compression. Other equipment at the facility includes: one Taylor Forge triethylene glycol dehydration unit with a 1.25 MMBtu/hr reboiler (S003); and one Cummins model GTA-1710 generator with a natural gas-fired engine (S006) rated at 710 hp. The John Zink flare (S004) and Peerless boiler (S005) have been removed from the facility.

The dehydration unit (S003) was modified in 2009, resulting in a reported reboiler burner heat input capacity of 0.95 MMBtu/hr, as referenced in both the current minor new source review permit and previous Title V renewal permit. According to the company, that heat input capacity is based on a thermal efficiency of 80% for the reboiler heat transfer coil. Information presented with their current Form 805 application submittal indicates the heat input capacity of the reboiler burner is more accurately calculated to be 1.25 MMBtu/hr, based on an industry accepted thermal efficiency of 60% for the reboiler heat transfer coil. The revised reboiler heat input capacity of 1.25 MMBtu/hr is reflected in this Statement of Legal and Factual Basis and the Title V renewal permit.

The facility is a Title V major source of nitrogen oxides (NO_x), carbon monoxide (CO) and formaldehyde, which is a hazardous air pollutant (HAP). This source is located in an attainment area for all pollutants, and is a Prevention of Significant Deterioration minor source. The facility

is currently permitted under a minor new source review (NSR) permit issued on May 26, 2009, and a Title V operating permit with an expiration date of November 29, 2021.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, was most recently conducted on May 5, 2020. All reports and other data required by permit conditions or regulations, which are submitted to DEQ, have been evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNITS

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
S001	S0011	Cooper-Bessemer, model W-330, natural gas-fired reciprocating compressor engine	4,650 horsepower	Air/Fuel ratio controller	Not Applicable	NOx, CO and total hydrocarbons	5/26/09
S002	S0021	Cooper-Bessemer, model W-330, natural gas-fired reciprocating compressor engine	4,650 horsepower	Air/Fuel ratio controller	Not Applicable	NOx, CO and total hydrocarbons	5/26/09
S003	S003	Taylor Forge glycol dehydration unit natural gas-fired reboiler burner**	1,250,000 Btu/hr**	None	Not Applicable	None	5/26/09
S006	S006	Cummins, model GTA-1710, natural gas-fired generator engine, used for emergency electrical power	710 horsepower	None	Not Applicable	None	5/26/09

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
S003	S003	Taylor Forge glycol dehydration unit	60 million standard cubic feet of gas per day, input	Tornado Technologies, Inc. TTI-DSCVI natural gas-fired thermal oxidizer rated at 1.736 MMBtu/hr	S003-TO	VOC, benzene, toluene, ethyl benzene and xylenes	5/26/09

*The Size/Rated capacity and PCD efficiency are provided for informational purposes only, and are not an applicable requirement.

**The dehydration unit (S003) was modified in 2009, resulting in a reported reboiler burner heat input capacity of 0.95 MMBtu/hr, as referenced in both the current minor new source review permit and previous Title V renewal permit. According to the company, that heat input capacity was based on a thermal efficiency of 80% for the reboiler heat transfer coil. Information presented with their Form 805 application submittal for this Title V renewal permit indicates the heat input capacity of the reboiler burner is more accurately calculated to be 1.25 MMBtu/hr, based on an industry accepted thermal efficiency of 60% for the reboiler heat transfer coil. The revised reboiler heat input capacity of 1.25 MMBtu/hr is reflected in this Statement of Legal and Factual Basis and the Title V renewal permit. This revision has no impact on any current requirements applicable to the reboiler and does not trigger any new applicable requirements.

EMISSIONS INVENTORY

Emissions from the facility in 2020 are summarized in the following tables.

2020 Criteria Pollutant and Greenhouse Gas Emissions in Tons/Year

Emissions	VOC	CO	SO ₂	PM ₁₀	PM _{2.5}	NO _x	CO _{2e}
Total	10.75	43.81	0.10	8.52	8.52	100.28	21,596

2020 Facility Hazardous Air Pollutant (HAP) Emissions

Pollutant	Hazardous Air Pollutant Emission in Tons/Yr
Acrolein	1.15
Formaldehyde	9.33
Methylene Chloride	0.04

FUEL BURNING EQUIPMENT REQUIREMENTS – Cooper-Bessemer engines (S001 and S002), reboiler burner (S003), and Cummins generator engine (S006)

Pursuant to 9VAC5-80-1210 and 9VAC5-20-220, a mutual and final determination has been made that the Peerless, Model 211A8, natural gas-fired hot water boiler (S005) is permanently shut down. In accordance with the provisions of 9VAC5-20-220, requirements in the 2009 minor NSR permit pertaining to the boiler are void. Therefore, the boiler is not included in this Statement of Legal and Factual Basis or the Title V renewal permit.

Citations

The following citations from the Virginia Administrative Codes identify the underlying authorities to implement the specific requirements determined to be applicable in the minor NSR permit:

9VAC5-80-1180: Standards and conditions for granting permits,
9VAC5-50-260: Standards of performance for stationary sources,
9VAC5-50-30: Performance testing,
9VAC5-50-50: Notification, records, and reporting,
9VAC5-20-180: Facility and control equipment maintenance or malfunction,
9VAC5-170-130: Right of entry,
9VAC5-80-1210: Permit invalidation, suspension, revocation and enforcement,
9VAC5-80-1240: Transfer of permits,
9VAC5-170-60: Availability of information, and
9VAC5-20-160: Registration.

Limitations

The following requirements are from the minor NSR Permit issued on May 26, 2009:

Condition 2: NO_x, CO and total hydrocarbon (THC) emissions from each Cooper-Bessemer compressor engine (S001 and S002) shall be controlled by ignition retard, air manifold temperature reduction and by maintaining an optimum air-to-fuel ratio.

Condition 4: Each Cooper-Bessemer compressor engine (S001 and S002) shall consume no more than 34,324 cubic feet per hour and 300,680,000 cubic feet per year of natural gas.

Condition 5: The approved fuel for each Cooper-Bessemer compressor engine (S001 and S002), reboiler (S003), and Cummins generator engine (S006) is natural gas.

Condition 6: Emissions from the operation of each Cooper-Bessemer compressor engine (S001 and S002) shall not exceed the limits specified below:

Pollutant	Compressors S001 & S002 (per unit)		Combined Compressor Emissions (Total)	
	lb/hr	tons/yr	lb/hr	tons/yr
NO _x	16.91	74.09	33.82	148.18
CO	15.38	67.35	30.76	134.70
VOC	6.15	26.94	12.30	53.88
PM10	1.69	7.40	3.38	14.80

Note: A review of the DEQ evaluation of the permit application for the current May 26, 2009 NSR permit indicates the emission factor used in calculating PM10 emission limits include both filterable and condensable portions of PM10 as presented in AP-42, Table 3.2-1 (July 2000). It is clarified in the Title V permit that the emission limit for PM10 is for total PM10 (condensable and filterable).

Condition 7: Visible emissions from each Cooper-Bessemer compressor engine exhaust stack (S0011 and S0021) shall not exceed 5% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).

The Cooper-Bessemer compressor engines were constructed in 1986. Turbocharger assemblies on the two engines were replaced in 1991, and again in 2009. The turbocharger replacements are considered modifications of the engines. As natural gas engines modified after June 12, 2006, the following provisions of 40 CFR Part 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines apply to the Cooper-Bessemer compressor engines (S001 and S002):

40 CFR 60.4233(f)(4)(i): Emission standards for NO_x (3 g/HP-hr), CO (4 g/HP-hr) and VOC (1 g/HP-hr) where the date of manufacture is prior to July 1, 2007 for non-emergency engines with a maximum engine power greater than or equal to 500 HP;

Note: The emission limits from Condition 6 of the minor NSR permit are more stringent than the applicable emission standards in Subpart JJJJ. Therefore, the Subpart JJJJ emission standards are not specifically listed in the Title V permit.

40 CFR 60.4234: Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine; and

40 CFR 60.4243(c): Demonstrate compliance according to the provisions of §60.4243(b)(2)(ii), which include, to the extent practicable, maintaining and operating the engine in a manner consistent with good air pollution control practice for minimizing emissions.

The Cooper-Bessemer compressor engines were constructed in 1986. Turbocharger assemblies on the two engines were replaced in 1991, and again in 2009. The turbocharger replacements are not considered reconstruction of the engines under 40 CFR Part 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. As 2 stroke lean burn engines constructed before December 19, 2002, the following provisions of 40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines apply to the Cooper-Bessemer engines (S001 and S002):

40 CFR 63.6590(b)(3)(i): Existing spark ignition 2 stroke lean burn (2SLB) stationary reciprocating internal combustion engines (RICE) with a site rating of more than 500 brake horsepower located at a major source of HAP emissions, do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements;

40 CFR 63.6600(c): Existing 2SLB stationary RICE with a site rating of more than 500 brake horsepower located at a major source of HAP emissions do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to the subpart or operating limitations in Tables 1b and 2b to the subpart; and

40 CFR 63.6640(e): Existing 2SLB stationary RICE do not need to comply with the requirements in Table 8 of the subpart.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9VAC5-50, Article 1, Standards of Performance for Visible Emissions and Fugitive Dust/Emissions.

According to 9VAC5-50-60 A.1, the provisions of Article 1 apply to each source of visible emissions. 9VAC5-50-80 of Article 1 limits discharge into the atmosphere from any affected facility any visible emissions, which exhibit greater than 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity. This opacity limit is included in the Title V permit for the reboiler burner (S003), and Cummins generator engine (S006) exhaust stacks.

As an existing emergency engine, the following provisions of 40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines apply to the Cummins model GTA-1710 generator engine (S006):

40 CFR 63.6590(b)(3)(iii): Existing emergency stationary RICE with a site rating of more than 500 brake horsepower located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements;

40 CFR 63.6600(c): Emergency stationary RICE with a site rating of more than 500 brake horsepower located at a major source of HAP emissions do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to the subpart or operating limitations in Tables 1b and 2b to the subpart;

40 CFR 63.6640(e): Existing emergency stationary RICE do not need to comply with the requirements in Table 8 of the subpart; and

40 CFR 63.6640(f)(1) – (4): The owner or operator must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (f)(4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If the engine is not operated according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

Note: Due to the vacatur of 40 CFR 63.6640(f)(2)(ii)-(iii) by the U.S Court of Appeals for the District of Columbia Circuit on May 1, 2015, the provisions of those paragraphs are not included in the Title V permit.

Monitoring

The following monitoring requirement pertaining to the Cooper-Bessemer engines is from the minor NSR Permit issued on May 26, 2009:

Condition 2: The air-to-fuel ratio shall be monitored with an air-to-fuel ratio controller.

In accordance with the provisions of 9VAC5-50-40 F, 9VAC5-50-50 and 9VAC5-80-110 E.2, a condition is included in the Title V permit requiring the permittee to periodically monitor the air-to-fuel ratio controller by recording on a daily basis air manifold pressure and fuel gas pressure for each Cooper-Bessemer compressor engine (S001 and S002).

As engines modified after June 12, 2006, the following provisions of 40 CFR Part 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines apply to the Cooper-Bessemer compressor engines (S001 and S002):

40 CFR 60.4243(c): Demonstrate compliance according to the provisions of §60.4243(b)(2)(ii), which include, keep a maintenance plan and records of conducted maintenance; and

40 CFR 60.4243(g): The air-to-fuel controller must be maintained and operated appropriately in order to ensure proper operation of the engine to minimize emissions at all times.

In accordance with the provisions of 9VAC5-50-40 F, 9VAC5-50-50 and 9VAC5-80-110 E.2, a condition is included in the Title V permit requiring the permittee to monitor the operation of the Cummins generator engine (S006) as an emergency engine under MACT Subpart ZZZZ by recording each operation of the engine. Each record of operation shall include the date and time of operation, number of hours of operation and the reason for operation, at a minimum.

The fuel consumption limitations for the Cooper-Bessemer compressor engines (S001 and S002) from the minor NSR permit Condition 4 are based on maximum heat input capacity of each engine and, therefore, unlikely to be violated. Periodic monitoring of the fuel consumption limits through recordkeeping as required by minor NSR permit Condition 9 is expected to provide reasonable assurance of compliance with the fuel consumption limits.

Combustion units firing natural gas and being properly maintained are not expected to violate an SO₂, PM or opacity emission standard. The minor NSR permit requires fuel burning equipment (S001, S002, S003 and S006) to burn only natural gas. In accordance with the recordkeeping provisions of 9VAC5-50-50 and monitoring provisions of 9VAC5-80-110 E.2, periodic monitoring of the approved fuel requirement from minor NSR permit Condition 5 is achieved by including a condition in the Title V permit requiring the permittee to keep records of monthly and annual consumption of natural gas for the fuel burning equipment.

The emission limits for the Cooper-Bessemer compressor engines (S001 and S002) contained in Condition 6 of the minor NSR permit are based on fuel consumption limits for the engines contained in Condition 4 of the minor NSR permit. The fuel consumption limitations for the Cooper-Bessemer compressor engines are based on maximum heat input capacity of each engine and, therefore, unlikely to be violated. If the Cooper-Bessemer compressor engines consume no more natural gas than is permitted, then compliance with the emission limits will not be violated. Periodic monitoring of natural gas consumption through recordkeeping as required by minor

NSR permit Condition 9 is expected to provide reasonable assurance of compliance with emission limits.

Recordkeeping

For the purpose of Title V, all records relevant to this permit and facility must be maintained for 5 years. The permit includes requirements for maintaining records of all monitoring and testing required by the permit.

The following recordkeeping requirements are from the minor NSR Permit issued on May 26, 2009:

Condition 9: The permittee shall maintain daily records of air manifold pressure and fuel gas pressure, and monthly and annual consumption of natural gas for each Cooper-Bessemer engine (S001 and S002).

As engines modified after June 12, 2006, the following provisions of 40 CFR Part 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines apply to the Cooper-Bessemer compressor engines (S001 and S002):

40 CFR 60.4243(c): Demonstrate compliance according to the provisions of §60.4243(b)(2)(ii), which include, keep a maintenance plan and records of conducted maintenance; and

40 CFR 60.4245(a): General recordkeeping requirements.

As an existing emergency engine, the following recordkeeping provisions of 40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines apply to the Cummins model GTA-1710 generator engine (S006):

40 CFR 63.6655(e)(2): Keep records of the maintenance in order to demonstrate that the existing stationary emergency RICE was operated and maintained according to the owner or operator maintenance plan.

In accordance with the recordkeeping requirements of 9VAC5-50-50 F and H, and 9VAC5-80-110, a condition is included in the Title V permit requiring the permittee to maintain records of monthly and annual hours of operation of the Cummins generator engine (S006) and records of operation of the engine. Each record of operation shall include the date and time of operation, number of hours of operation and the reason for operation, at a minimum.

In accordance with the recordkeeping requirements of 9VAC5-50-50 F and H, and 9VAC5-80-110, a condition is included in the Title V permit requiring the permittee to maintain records of

emission factors and equations used to calculate emissions, and monthly and annual consumption of natural gas for the reboiler burner (S003) and Cummins generator engine (S006).

Testing

The following requirement is from the minor NSR Permit issued on May 26, 2009:

Condition 8: The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time using appropriate methods. Test ports shall be provided when requested at the appropriate locations.

As engines modified after June 12, 2006, the following provisions of 40 CFR Part 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines apply to the Cooper-Bessemer compressor engines (S001 and S002):

40 CFR 60.4243(c): Demonstrate compliance according to the provisions of §60.4243(b)(2)(ii), which include, an initial performance test and subsequent performance testing every 8,760 hours of operation or 3 years, whichever comes first, thereafter to demonstrate compliance;

40 CFR 60.4243(i): Conduct a performance test within 60 days after the engine commences operation after modification; and

40 CFR 60.4244: Performance tests must be conducted in accordance with the procedures in paragraphs (a) through (f) of this section.

Note: The initial performance tests required in 40 CFR 60.4243(c) have been completed. Therefore, the initial testing requirement no longer applies and is not included in the Title V permit. Applicable subsequent testing requirements are included in the Title V permit.

In accordance with the provisions of 9VAC5-50-30 and 9VAC5-80-110 E.2, a condition is included in the Title V permit requiring the permittee to conduct Method 9 visible emission evaluations (VEE) on each Cooper-Bessemer compressor engine (S001 and S002) concurrently with the performance testing required by 40 CFR 60.4243(c). Records of each VEE are required in accordance with the provisions of 9VAC5-50-50 D and reporting the results of each VEE is required in accordance with the provisions of 9VAC5-50-50 H.

Reporting

The initial notification of commencement of modification and startup of the Cooper-Bessemer engines as required in Condition 10 of the May 26, 2009 minor NSR permit has been completed. Therefore, this requirement no longer applies and is not included in the Title V permit.

The Title V permit includes semi-annual compliance reporting, excess emission reporting, and the occurrence of any malfunctions or permit deviations.

As engines modified after June 12, 2006, the following provisions of 40 CFR Part 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines apply to the Cooper-Bessemer compressor engines (S001 and S002):

40 CFR 60.4245(c): Submit an initial notification as required in 40 CFR 60.7(a)(1) including the information in paragraphs (c)(1) through (5) of this section; and

40 CFR 60.4245(d): Submit a copy of each performance test within 60 days after the test has been conducted.

Note: The initial notification required in 40 CFR 60.4245(c) has been completed and not included in the Title V permit.

PROCESS EQUIPMENT REQUIREMENTS – Taylor Forge glycol dehydration unit (S003)

Limitations

The following requirements are from the minor NSR Permit issued on May 26, 2009:

Condition 3: VOC emissions from the Taylor Forge glycol regeneration unit shall be controlled by an air-cooled condenser system. Upon removal of the condenser system, VOC emissions from the glycol regeneration unit shall be controlled by a Tornado Technologies, Inc. natural gas-fired thermal oxidizer, or equivalent.

Note: The thermal oxidizer went online in September 2007. Therefore, the air-cooled condenser system requirement no longer applies and is not included in the Title V permit.

Condition 5: The approved fuel for the Tornado Technologies thermal oxidizer is natural gas.

In accordance with the provisions for air pollution control practices in 9VAC5-50-20 E and 9VAC5-80-110 C.1.c, a condition is included in the Title V permit requiring the permittee to maintain a minimum temperature of 1,500 °F in the thermal oxidizer chamber to ensure effective operation of the oxidizer.

The glycol dehydration unit at the facility was constructed before August 23, 2011, and annual average benzene emissions from the unit, determined according to 40 CFR 63.1282(a)(2)(ii), are less than 0.90 megagrams per year. Therefore, the dehydration unit is considered an existing small glycol dehydration unit as defined in 40 CFR 1270(b)(2) and 40 CFR 63.1271. As a natural gas transmission facility with potential emissions of HAP at major source levels and

containing an existing small glycol dehydration unit, the following provisions of 9VAC5-60-100, Subpart HHH of Virginia air quality regulations and 40 CFR Part 63, Subpart HHH – National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities apply to the glycol dehydration unit:

40 CFR 63.1272(a): The provisions of the subpart shall apply at all times;

40 CFR 63.1274(a): Table 2 of the subpart specifies applicable provisions of subpart A;

40 CFR 63.1274(c)(1): Comply with control requirements for glycol dehydration unit process vents specified in §63.1275;

40 CFR 63.1274(h): At all times operate affected source in a manner consistent with safety and good air pollution control practices for minimizing emissions;

40 CFR 63.1275(b): Except as provided in paragraph (c), comply with the requirements in §63.1275(b)(1) and (b)(2);

40 CFR 63.1275(b)(1): Control air emissions from each glycol dehydration unit process vent by either paragraph (b)(1)(i) or (iii) of this section;

Note: The provisions of 40 CFR 63.1275(b)(1)(i) apply only to large dehydration units and are not included in the Title V permit for the facility.

40 CFR 63.1275(b)(1)(iii): Limit BTEX emissions from each existing small glycol dehydration unit to the limit determined in Equation 1 of this section in accordance with one of the alternatives specified in paragraphs (b)(1)(iii)(A) through (D) of this section; and

Note: Information in the application indicates the permittee has chosen to meet the applicable BTEX limit in accordance with the provisions of 40 CFR 63.1275(b)(1)(iii)(D). Therefore, applicable requirements further specified for the dehydration unit in this Statement of Basis are based on those provisions.

40 CFR 63.1275(b)(1)(iii)(D): Demonstrate that the emissions limit is met through actual uncontrolled operation of the small glycol dehydration unit. Document operational parameters in accordance with the requirements specified in §63.1281(e) and emissions in accordance with the requirements specified in §63.1282(a)(3).

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9VAC5-50, Article 1, Standards of Performance for Visible Emissions and Fugitive Dust/Emissions.

According to 9VAC5-50-60 A.1, the provisions of Article 1 apply to each source of visible emissions. 9VAC5-50-80 of Article 1 limits discharge into the atmosphere from any affected facility any visible emissions, which exhibit greater than 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity. This opacity limit is included in the Title V permit for the reboiler vent as exhausted through the thermal oxidizer.

Monitoring

As a natural gas transmission facility subject to the provisions of 9VAC5-60-100, Subpart HHH of Virginia air quality regulations and 40 CFR Part 63, Subpart HHH – National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities, the following monitoring requirements apply to the glycol dehydration unit:

40 CFR 63.1274(c)(2): Comply with monitoring requirements specified in §63.1283.

Note: Since the permittee demonstrates compliance with the applicable emissions limit through uncontrolled operation of the glycol dehydration unit, there are currently no monitoring requirements specified in §63.1283 applicable to the glycol dehydration unit.

In accordance with the monitoring requirements of 9VAC5-50-40 F and 9VAC5-80-110 E.2, periodic monitoring of the thermal oxidizer temperature chamber requirement is achieved by including conditions in the Title V permit requiring the permittee to install, maintain, calibrate and operate a temperature monitoring device and record the thermal oxidizer chamber temperature on an hourly basis.

The thermal oxidizer firing natural gas and being properly maintained is not expected to violate an opacity emission standard. The permit requires the thermal oxidizer to burn only natural gas. In accordance with the recordkeeping provisions of 9VAC5-50-50 and monitoring provisions of 9VAC5-80-110 E.2, periodic monitoring of the approved fuel is achieved by including a condition in the Title V permit requiring the permittee to keep records of monthly and annual consumption of natural gas for the thermal oxidizer.

Recordkeeping

For the purpose of Title V, all records relevant to this permit and facility must be maintained for 5 years. The permit includes requirements for maintaining records of all monitoring and testing required by the permit.

In accordance with the recordkeeping provisions of 9VAC5-50-50 F and H, and 9VAC5-80-110, the permittee is required to keep hourly records of the thermal oxidizer temperature and monthly and annual records of natural gas consumption for the thermal oxidizer.

As a natural gas transmission facility subject to the provisions of 9VAC5-60-100, Subpart HHH of Virginia air quality regulations and 40 CFR Part 63, Subpart HHH – National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities, the following recordkeeping requirements apply to the glycol dehydration unit:

40 CFR 63.1270(a)(3): Maintain records of the annual facility natural gas throughput;

40 CFR 63.1274(c)(3): Comply with recordkeeping requirements specified in §63.1284;

40 CFR 63.1275(b)(1)(iii)(D): Document operational parameters in accordance with the requirements specified in §63.1281(e) and emissions in accordance with the requirements specified in §63.1282(a)(3);

40 CFR 63.1284(a): Applicable recordkeeping provisions of subpart A are listed in Table 2 of this subpart;

40 CFR 63.1284(b)(1)(i) – (iv): Except as specified in paragraphs (c) and (d) of this section, maintain records of all information required by the subpart; retain records for a least 5 years; in a readily accessible manner; on site for the most recent 12 months; may be retained off site for remaining 4 years; paper records or specified computer-readable format;

40 CFR 63.1284(b)(9): Maintain records of glycol dehydration unit baseline operations calculated as required under §63.1281(e)(1); and

40 CFR 63.1284(f): Records of the occurrence and duration of each malfunction and actions taken to minimize emissions and restore the malfunction process to normal operation.

Testing

The following requirement is from the minor NSR Permit issued on May 26, 2009:

Condition 8: The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time using appropriate methods. Test ports shall be provided when requested at the appropriate locations.

As a natural gas transmission facility subject to the provisions of 9VAC5-60-100, Subpart HHH of Virginia air quality regulations and 40 CFR Part 63, Subpart HHH – National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities, the following testing requirements apply to the glycol dehydration unit:

40 CFR 63.1282(c)(2): If no control device is used to comply with the emission limit in §63.1275(b)(1)(iii), the owner or operator must determine the glycol dehydration unit BTEX emissions as specified in paragraphs (c)(2)(i) through (iii) of this section. Compliance is

demonstrated if the BTEX emissions determined as specified in paragraphs (c)(2)(i) through (iii) are less than the emission limit calculated using the equation in §63.1275(b)(1)(iii);

40 CFR 63.1282(c)(2)(i): Method 1 or 1A, 40 CFR Part 60, Appendix A, as appropriate, shall be used for selection of the sampling sites at the outlet of the glycol dehydration unit process vent. Any references to particulate mentioned in Methods 1 and 1A do not apply to this section;

40 CFR 63.1282(c)(2)(ii): The gas volumetric flowrate shall be determined using Method 2, 2A, 2C, or 2D, 40 CFR Part 60, Appendix A, as appropriate;

40 CFR 63.1282(c)(2)(iii): The BTEX emissions from the outlet of the glycol dehydration unit process vent shall be determined using the procedures specified in paragraph (d)(3)(v) of this section. As an alternative, the mass rate of BTEX at the outlet of the glycol dehydration unit process vent may be calculated using the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual; and

40 CFR 63.1282(d)(3)(v): To determine compliance with the BTEX emission limit specified in §63.1275(b)(1)(iii) the owner or operator shall use one of the following methods: Method 18, 40 CFR Part 60, Appendix A; ASTM D6420-99 (Reapproved 2004) (incorporated by reference as specified in §63.14), as specified in §63.772(a)(1)(ii); or any other method or data that have been validated according to the applicable procedures in Method 301, 40 CFR Part 63, Appendix A.

Reporting

As a natural gas transmission facility subject to the provisions of 9VAC5-60-100, Subpart HHH of Virginia air quality regulations and 40 CFR Part 63, Subpart HHH – National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities, the following reporting requirements apply to the glycol dehydration unit:

40 CFR 63.1274(b): All reports required under this subpart shall be sent to the Administrator at the appropriate address listed in §63.13. Reports may be submitted on electronic media;

40 CFR 63.1274(c)(3): Comply with reporting requirements specified in §63.1285;

40 CFR 63.1285(a): Applicable reporting provisions of subpart A are listed in Table 2 of this subpart;

40 CFR 63.1285(b)(1)(ii): Submit initial notification required for existing sources under §63.9(b)(2) within 1 year after the affected source becomes subject to the provisions of this subpart or by October 13, 2013, whichever is later;

Note: The initial notification has been submitted. Therefore, this requirement no longer applies and is not included in the Title V permit.

40 CFR 63.1285(b)(4): Submit a Notification of Compliance Status Report as described in paragraph (d) of this section;

Note: The Notification of Compliance Status Report has been submitted. Therefore, this requirement no longer applies and is not included in the Title V permit.

40 CFR 63.1285(b)(5): Submit Periodic Reports as described in paragraph (e) of this section;

40 CFR 63.1285(b)(6): Periodic Report shall include information on any malfunction that occurred during reporting period;

40 CFR 63.1285(d): Submit Notification of Compliance Status Report as required under §63.9(h), and including information specified in (d)(1) through (12) of this section within 180 days after the compliance date specified in §63.1270(d);

Note: The Notification of Compliance Status Report has been submitted. Therefore, this requirement no longer applies and is not included in the Title V permit.

40 CFR 63.1285(e): Submit semi-annual Periodic Reports in accordance with paragraphs (e)(1) and (e)(2) of this section;

40 CFR 63.1285(f)(1) – (4): Whenever a process change is made, or a change in any information submitted in the Notification of Compliance Status Report, the owner or operator shall submit a report within 180 days after the process change is made or as part of the next Periodic Report as required under paragraph (e) of this section, whichever is sooner. The report shall include in the information specified in (f)(1) – (f)(4), of this section; and

40 CFR 63.1285(g)(2): All reports required by this subpart not subject to the requirements in paragraph (g)(1) of this section must be sent to the Administrator at the appropriate address listed in §63.13.

INSIGNIFICANT EMISSIONS UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9VAC5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation¹ (9VAC_)	Pollutant(s) Emitted (9VAC5-80-720 B.)	Rated Capacity (9VAC5-80-720 C.)
WH-1	Heater: Natural gas-fired hot water heater	5-80-720 B and C	NO _x , CO, VOC, SO ₂ and PM ₁₀	0.04 MMBtu/hr
T002	Storage Tank: Pipeline Liquids (H ₂ O)	5-80-720 B	VOC	12,000 gallons
T003	Storage Tank: Oil	5-80-720 B	VOC	7,000 gallons
T004	Storage Tank: Coolant	5-80-720 B	VOC	7,000 gallons
T005	Storage Tank: Oil	5-80-720 B	VOC	3,200 gallons
T006	Storage Tank: Triethylene Glycol (TEG)	5-80-720 B	VOC	3,000 gallons
T007	Storage Tank: Oil	5-80-720 B	VOC	1,000 gallons
T008	Storage Tank: Coolant	5-80-720 B	VOC	1,000 gallons
T010	Storage Tank: TEG	5-80-720 B	VOC	3,000 gallons
T013	Storage Tank: Oil	5-80-720 B and C	VOC	90 gallons
T014	Storage Tank: Oil	5-80-720 B and C	VOC	250 gallons
L001	Truck Loading: Pipeline Liquids (H ₂ O)	5-80-720 B	VOC	9,000 gal/hr
L003	Truck Loading: Oil	5-80-720 B	VOC	9,000 gal/hr
L004	Truck Loading: Coolant	5-80-720 B	VOC	8,000 gal/hr
L005	Truck Loading: TEG	5-80-720 B	VOC	6,000 gal/hr
PC01	Piping Components: Natural Gas	5-80-720 B	VOC	N/A
PC03	Piping Components: Oil	5-80-720 B	VOC	N/A

Emission Unit No.	Emission Unit Description	Citation¹ (9VAC_)	Pollutant(s) Emitted (9VAC5-80-720 B.)	Rated Capacity (9VAC5-80-720 C.)
PC04	Piping Components: Coolant	5-80-720 B	VOC	N/A
PC05	Piping Components: TEG	5-80-720 B	VOC	N/A
PC06	Piping Components: Pipeline Liquids (H ₂ O)	5-80-720 B	VOC	N/A
GR01	Gas Releases: Miscellaneous	5-80-720 A and B	VOC	N/A
PW01	Parts Washer: Remote Reservoir	5-80-720 B	VOC	N/A

¹The citation criteria for insignificant activities are as follows:

9VAC5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9VAC5-80-720 B - Insignificant due to emission levels

9VAC5-80-720 C - Insignificant due to size or production rate

PERMIT SHIELD AND INAPPLICABLE REQUIREMENTS

New Source Performance Standard (NSPS) requirements for petroleum liquid storage vessels in 40 CFR Part 60 Subpart Ka and 9VAC5-50-410 are not applicable. According to application information, the storage capacity of each petroleum liquid storage vessel at the facility is less than the applicable capacity indicated by the standards.

NSPS requirements for volatile organic liquid storage vessels in 40 CFR Part 60 Subpart Kb and 9VAC5-50-410 are not applicable. 40 CFR 60.110b(a) indicates that the subpart applies to each vessel with a capacity greater than or equal to 75 m³. Application information indicates there is no tank at the facility with a capacity greater than 12,000 gallons (45.43 m³).

NSPS requirements for stationary gas turbines in 40 CFR Part 60 Subpart GG and 9VAC5-50-410 are not applicable. There are no gas turbines at the facility.

NSPS requirements for equipment leaks of VOC from onshore natural gas processing plants in 40 CFR Part 60 Subpart KKK and 9VAC5-50-410 are not applicable. The facility does not engage in natural gas liquid extraction or fractionation of mixed natural gas liquids and therefore is not a natural gas processing plant as defined in the subpart.

NSPS requirements for onshore natural gas processing: sulfur dioxide emissions in 40 CFR Part 60 Subpart LLL and 9VAC5-50-410 are not applicable. The facility does not engage in natural gas sweetening.

NSPS requirements for VOC emissions from synthetic organic chemical manufacturing industry (SOCMI) distillation operations in 40 CFR Part 60 Subpart NNN and SOCMI equipment leaks of VOC in 40 CFR Part 60 Subpart VV and 9VAC5-50-410 are not applicable. The dehydration unit does not produce, as defined in the subparts, any of the listed chemicals as a product, co-product, or intermediate, and is not considered part of the affected industry.

NSPS requirements for crude oil and natural gas production, transmission and distribution facilities in 40 CFR Part 60 Subpart OOOO are not applicable. The provisions of Subpart OOOO apply to facilities that commence construction, modification or reconstruction after August 23, 2011, and on or before September 18, 2015. There has been no construction, modification or reconstruction of the facility after August 23, 2011.

NSPS requirements for crude oil and natural gas facilities in 40 CFR Part 60 Subpart OOOOa are not applicable. The provisions of Subpart OOOOa apply to facilities for which construction, modification or reconstruction commenced after September 18, 2015. There has been no construction, modification or reconstruction of the facility after September 18, 2015.

The MACT standards for oil and natural gas production facilities in 40 CFR Part 63 Subpart HH and 9VAC5-60-100 are not applicable. The facility does not produce oil or natural gas.

The Taylor Forge glycol regeneration boiler is part of the glycol dehydration unit, S003, which is an affected source subject to the provisions of 40 CFR Part 63, Subpart HHH – National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities. Therefore, in accordance with 40 CFR 63.7491(h), the regeneration boiler is not subject to the provisions of Subpart DDDDD.

The provisions of 40 CFR Part 98 – Mandatory Greenhouse Gas Reporting require reporting of greenhouse gas (GHG) emissions. The definition of “applicable requirement” in 40 CFR 70.2 and 71.2 does not include requirements such as those included in Part 98, promulgated under Clean Air Act (CAA) section 114(a)(1) and 208. Therefore, the requirements of 40 CFR Part 98 are not applicable under the Title V permitting program.

The current minor NSR permit for the East Tennessee Natural Gas, LLC Compressor Station 3401 facility contains no GHG-specific applicable requirements and there have been no modifications at the facility requiring a PSD permit. Therefore, there are no applicable requirements for the facility specific to GHG.

The provisions of 40 CFR Part 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines do not apply to the Cummins, model GTA-1710, natural

gas-fired, emergency generator engine (S006) since the engine was constructed prior to the applicability dates specified in the subpart.

A review of 40 CFR Part 64, Compliance Assurance Monitoring (CAM) indicates those requirements do not apply to any of the fuel burning equipment, S001, S002, S003 and S006. Condition 2 of the NSR permit requires control of NO_x, CO and THC emissions from each Cooper-Bessemer compressor engine (S001 and S002) by ignition retard, air manifold temperature reduction and maintaining an optimum air-to-fuel ratio, each of which prevents pollutants from forming. 40 CFR 64.1 indicates those type measures are considered passive controls and not control devices for the purposes of CAM. Therefore, the engines do not meet the applicability criteria in 40 CFR 64.2 (a)(2). No control devices are associated with the other fuel burning equipment, S003 and S006, and potential emissions from those units are below Title V major source levels. Therefore, S003 and S006 do not meet the applicability criteria in 40 CFR 64.2 (a)(2) or (a)(3).

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9VAC5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

Federal Enforceability

Article 1 (9VAC5-80-110 N) states that all terms and conditions in the Title V permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.

Permit Expiration

This condition refers to the Board taking action on a permit application. The “Board” refers to the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the Code of Virginia, and the “Department of Environmental Quality Agency Policy Statement No. 2-09”.

Failure / Malfunction Reporting

Section 9VAC5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9VAC5-20-180 is from the general regulations. All affected facilities are subject to section 9VAC5-20-180 including Title V facilities. A facility may make a single

report that meets the requirements of 9VAC5-20-180. The report must be made within four daytime business hours of discovery of the malfunction.

Permit Modification

This general condition cites the sections that follow:

9VAC5-80-50. Applicability, Federal Operating Permit for Stationary Sources

9VAC5-80-190. Changes to Permits

9VAC5-80-260. Enforcement

9VAC5-80-1100. Applicability, Permits For New and Modified Stationary Sources

9VAC5-80-1605. Applicability, Permits For Major Stationary Sources and Modifications

Located in Prevention of Significant Deterioration Areas

9VAC5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications

Locating in Nonattainment Areas

Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

A public notice regarding the draft permit will be published in *The Dickenson Star* newspaper in Clintwood, Virginia. A copy of the draft permit and public notice will be sent to the EPA prior to publication of the public notice.

A copy of the public notice will be sent to Kentucky, West Virginia and Tennessee as affected states, and all persons on the Title V mailing list by either postal mail or e-mail as requested.

Public comments will be accepted for at least 30 days from the date of publication of the public notice.